

Flightlines



Inside this edition;

**The Jodel History.
Aerobatics Performed by
20th Century Aircraft.
Undeserved Reputation.**



April 2011



Hugo Burns of the Roundwood Club.



Another Landing at Roundwood.

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On the Cover: *Boomerang seen at the Offaly Jet Fly-In*

The views expressed within are those of the individual contributors, and not necessarily those of the MACI Committee.

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Editorial

I have been approached by an independent television production company, based in Dublin, who have asked if there is anyone in our organisation who would be willing to talk to them, in Irish, about what the Bi-Planes of World War 1 were like, how dangerous they were and what it would have been like to fly them. Someone who knows a bit about those bi-planes and the risks involved. If you think you can be of help, can you please get in touch with me at secretarygeneral@maci.ie and I will pass on the contact details.

With the clocks going forward and the temperatures rising, flying prospects are looking good again. Modern radio gear and battery technology is now so reliable that there is a possibility that we can become a little blasé about maintenance. If you have not been stick twiddling over the winter months then it could be a wise move to give everything a good checking over before committing to aviation.

A check of my own equipment has revealed two flight batteries which are not holding charge as they used to. This is an easily resolved matter, and not exactly expensive. When you consider the possible loss of a model, and all the safety issues involved, a few simple checks can save more than just an embarrassing loss of height.

Thank you for the response to the offer to take Flightlines electronically, there are now more than a hundred members making use of this facility. If you would like to take advantage of this method of receiving Flightlines, please contact the Membership Secretary.

Once again can I ask for articles and photographs for future issues. I am very grateful to those who do make contributions and would welcome newcomers. The closing date for the next issue is May 31st.

Fly Safely

Chris Clarke

Introduction to Model Jets

Part 1

Jets have been regarded as the elite and expensive end of the model flying hobby. This may have been true five to ten years ago but more and more equipment is now available and now lots of second hand ready to fly aircraft can be picked up at very good prices, so jets are starting to be more common around the clubs.

One of the big mistakes, in starting in Jets is the Spitfire scenario where people buy a scale jet that is usually too big, too complicated, and too fast especially in regard to landing speeds.



What you need to have success and get much more enjoyment is start at the beginning. In my opinion and many others there is only one starter jet and that is the Boomerang range. The Nano, Intro, Sprint or Elan.

Jets seen last month in Offaly at the first of 2011 Jet Fly Ins All of these are great flying aeroplanes, they are just fantastic designs, and are very easy fly & land and a big confidence builder. This is exactly what you need, especially in the early days when the knee's are knocking and they will, no matter how much you have flown before, the buzz from flying a Jet goes straight to the knee's !

The one shown in the first picture is called the Intro, named for obvious reasons, they have now slightly changed it and the later version is called the sprint, but still has the same great flying characteristics.

The main benefits are ease of installation, can be flown with or without retracts for simplicity, a good size at 73" span so easy enough to see in the air, it is very, very easy to fly with very docile flight characteristics, difficult to stall and wont drop a wing and you can operate out of any normal club grass strip due to the short takeoff and slow landing speed.

There are other so called trainer Jets out there but none I have seen will tick all the same boxes.

The Boomerang Nano/Intro/Sprint normally fly with turbines rated anything from 13-22lbs thrust, these being the Jetcat P60, P70, P80, Wren 54-100 range, Kingtech 80 and some others. Jetcat being the most common. Prices for this range is €1400-2000 euro.

The slightly smaller Boomerang Nano below, which is a 60" span version, has got very popular recently due to the price (£375stg) and is an excellent weekend flyer on the smaller Wren44 or Jetcat P60 turbines.



Y o u don't have to go out and buy all new equipment, second hand Turbines and complete models ready to fly are now more widely available.

The best place to look for this is the turbine section of the BMFA,

(British Model Flying Assoc.), classifieds website. www.bmfaclassifieds.co.uk

Turbines can be picked up S/H from €600 upwards and many Boomerang type jets are seen for sale on BMFA site ready to fly for €800-1800 so the second hand route is defiantly away of getting into Jet flying a lot cheaper.

If anyone is interested in finding out more go to www.jmaireland.com which should be up and running shortly and keep an eye on the MACI calendar for a number of Jet Fly-Ins and Introduction days this year.

Next issue we will look at the actual equipment and what is needed to operate a Model Gas Turbine Jet Aircraft.

Seamus O'Donnell EI-2002

Newbridge & District Flying Club Presentation



The Committee of the Newbridge and District Flying Club are pictured on their flying site, the Curragh, presenting Celio Martins, (2nd from right), with the Pat Dunne Perpetual Trophy. This is awarded annually to a new member who shows the most dedication and a structured approach to safe flying.

It was an occasion for a double celebration as Celio had passed his M.A.C.I. 'A' Certificate the week previously.

Celio was born in Londrlin in the state of Payana, Brazil, and his parents are from the exotic City of Rio de Janeiro. Nine years ago he came to Ireland and has lived and worked in Naas Co Kildare since then.

Always interested in aircraft and flying, Celio joined the N.D.M.F.C. in 2010 and has established himself as a dedicated and popular member of the club.

Eamonn Keenan

For Sale.

OS-FS60 4-stroke, original exposed pushrods, believed to be Mk.4 with proper cast carb. Fitted with Jim Shelley 'Minimag' magneto. Looks un-run, mounted on block, terrific compression, silencer, no marks, only a patina befitting its age. €200.

Unique Fox 'Hawk' 60 red-head. Strange carb. Crankcase modified for silencer, so €60

MVVS 28 red-head, 2 silencers, NIB €50

SC-52A ABC rear needle, new in box, €40

K&B 45 Sport, new type, not yet fully run-in, in box. €50

Pfeffer .6cc r/c Blackhead, Squarehead (but the piston and cylinder are round). r/c carb and twin silencers. New in Box €85.

Aeromodelling books from 1940 to 1980, about 70 in total, Moulton, Warring, Sparey, Taylor, Bowden, Musciano, Chinn etc. Please e-mail me for list. Will cost less than €3 per book, so total €200

Balsa USA kit 'Phaeton 90' big biplane (try Google) 6 ft span, cost me an arm and a leg but will sell for leg only, €80.

Saito FA-80 Golden Knight. Near new in box, papers €110

Photos possible if required.

Contact Tim: 087-221 7338 or: timcostello1@eircom.net

ATTEMPTED HIGHJACKING OF AIRCRAFT AT WICKLOW FLYING FIELD

This incident began some weeks ago when a stranger accosted a member of the Shankill Club on a remote mountain road. The stranger said that his craft had run out of fuel but the Exol garage in Kilmac would not recognise his credit card.

It seems the AA were called and helped out although the stranger was not a member. However, he joined when he was assured that the AA service standards were "out of this world"



The security staff at the flying site was put on full alert and last week the surveillance cameras observed an individual attempting to board an 84 inch Piper Club. Reg No. IRL-3248.

The Club police arrested the individual and took him under escort to their compound at Killiny Bay where he was held under MACI rules for seventy-two hours.

The suspect was subjected to Mode 1 and 2 interrogation techniques. He confessed to having been hired by (Mr.....) the Chairman of (.....RMFC) to hijack the Cub so that it could be entered into a forthcoming competition, which it was certain to win.

He also explained that he held a pilots licence with full instrument rating.

The suspect's name was Joseph O'Gremlin from a family of flyers who moved from airfield to airfield designing and installing glitches in radio and fuel systems! However their trade had been ruined by the arrival of 3.5 MHz TX systems. Apparently FAS had refused them a retraining grant.

A file has been sent to the DPP. The only comment obtained from a club member, who refused to give his name, was “we are not alone!”

John Giles.

Security Consultant



Aerobatics Performed by Early 20th Century Aircraft

Part 2

In the first part of this article I listed a number of aerobatic manoeuvres to be examined. Among them I mentioned the “Vrille”. As described it could be an attractive option in a scale competition, with the right model of course. Here it is;

The Vrille was a manoeuvre developed in the early days of aviation to enable a pilot to reduce altitude fairly rapidly without over-stressing the aircraft and without travelling a great distance. For example it could be used to advantage to descend through a small gap in cloud without the risk of flying into the cloud and possibly losing control.

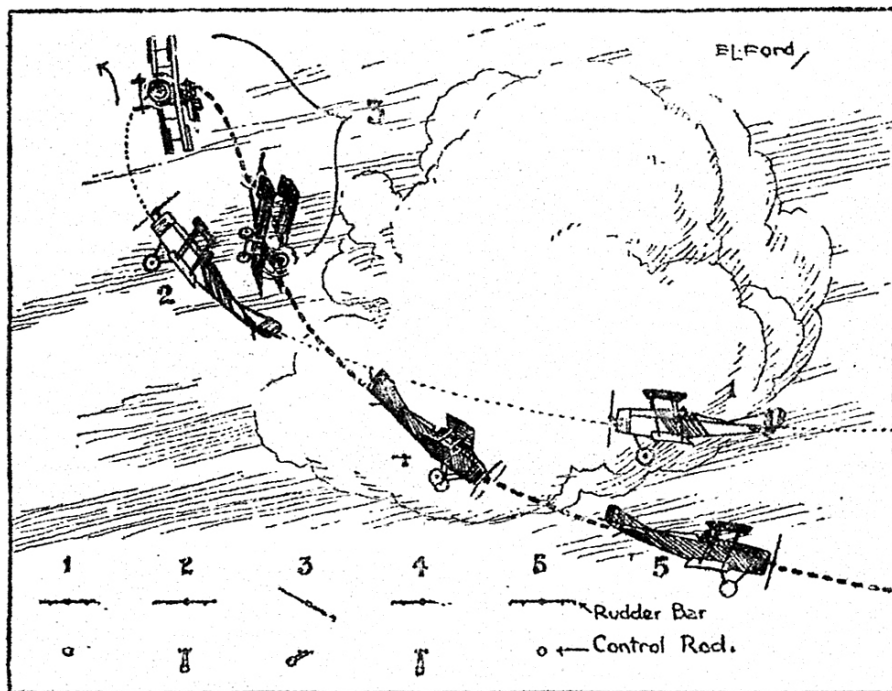
In the First World War pilots used the vrille as a trick to simulate loss of control and (hopefully) extricate themselves from a losing combat situation. Essentially it is a slow spiral dive, (not a spin), initiated by low throttle and progressive application of warp and rudder in the same direction and varying amounts of elevator to control the rate of descent and degree of bank.

As an acrobatic manoeuvre it is entered into wind on a line parallel to and at a point directly in front of the judges; after three 360-degree descending turns the aircraft resumes level flight in the same direction as that of entry and cruising power is resumed.

This neatly brings us to how the “Immelman Turn” was executed. In scale competitions it has been formulated as a half roll to level flight at the top of a half loop. Again, with the right model, it could be submitted as described in the book published in 1918, *“Practical Flying”*, a flying instruction manual for the newly formed RAF, and as an alternative to the above description. The description is as follows.

“Another variety of stunt is termed the cartwheel which can be mistaken for a loop, in certain circumstances, by spectators on the ground it is performed by getting up a little speed, by putting the control lever forward and then pulling it back, as in a zoom. When the machine is almost standing on its tail but before it has lost flying speed and controllability, apply rudder and bank in the same direction. The machine will answer to the controls, cartwheel in the air- and come out facing in the opposite direction. A slight modification of this manoeuvre results in the famous Immelman turn. The engine can then be cut when the machine turns about, and will allow it to dive, but if the stick is held fully back the machine will come out of the dive quite easily. This manoeuvre can be done with the engine off, the necessary momentum for the ascent and cartwheel turn being supplied by diving.” See Fig 1.

Fig 1



The Immelman turn, in which the machine rears up, turns sideways over the vertical, and comes out facing in the opposite direction. Below are shown the movements of the control lever and rudder bar required in making this manoeuvre.

In her superb book "Flight Fantastic", Annette Carson says of Max Immelman that he was a superb pilot and an imaginative innovator. He lost no time in gaining complete mastery of the new machine; even without the obligatory 'Eindecker training' that was considered essential before conversion to the tricky little monoplane. He used many new techniques of air combat which later became standard, such as finding an opponent's blind spot and attacking out of the sun, as well as using aerobatics for escape and evasion. He soon became well known for a 'hit-and-run' kind of attack which involved diving on an unsuspecting enemy from behind, swooping up and firing under his-tail, and then completing the upward zoom in a climbing, steeply banked turn of 180 degrees which swiftly took him back the way he had come.

This manoeuvre immediately became known as the Immelmann Turn, Immelmann himself being thereby immortalized in the world of aerobatics, whilst at the same time becoming an innocent cause of much controversy even to this day. The problem is an interesting one, and illustrates to what extent the task of tracing the origins of acrobatic manoeuvres is complicated by inconsistencies in contemporary, as well as later, documentation.

Today the title 'Immelmann Turn' is used in many countries, (Britain being one of the few exceptions), to mean an aerobatic figure starting with an ascending half-loop which is followed immediately by a half-roll bringing the aircraft back to erect, level flight again. In British aerobatics the name for this figure is a roll-off-the-top.

In the interests of accuracy, let it first be emphasized that Max Immelmann's wing-warping Fokker E-III could never have performed a roll-off-the-top. Here is what World War 1 fighter and test pilot Frank L Courtney says in an American publication *Flight Path* (William Kimber. 1972):

"... it would be a long time after Immelmann's death before a plane existed with enough speed and control for that manoeuvre. In any case Immelmann was too clever a fighter to use a stunt that would leave him suspended upside down, with almost inert controls, for enough seconds to make him a limp target for an enemy gunner.

The 'turn' that Immelmann actually used for his getaway, (and I saw him use it often enough), was simply a very steeply banked climbing turn, requiring much skill in those days when stalling was greatly feared.

It was an impressive feature of stunt flying before the war...Immelmann, however, was certainly the first to make combat use of it."

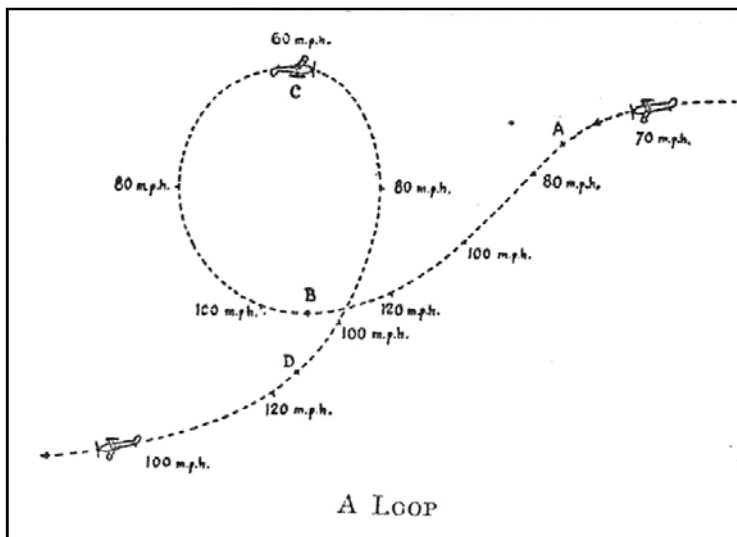
The great French aviator Adolphe Pegoud was a daring aerobatic pilot in the employ of Louis Bleriot, (first man to fly the English Channel). Happily, he and Louis Bleriot shared the same appetite for innovation and empirical research, and in late August 1913 Pegoud readily embarked on a series of flight safety experiments concocted together. Among the tests he had already made on Bleriot's behalf were trials of take-off and landing devices for use on aircraft carriers and trials of a parachute, (previously attempted only from a balloon), invented by G. Bonnet; under Bleriot's auspices he was the first pilot, on August 19 of that eventful year of 1913 to leave an aeroplane in flight by using such a parachute – much against the wishes of the French authorities who had tried to forbid the jump on the grounds that it was too dangerous!

The Times reported; ‘Pegoud was flying at a height of about 650 feet when he tested the parachute. He turned the machine downwards and released the parachute from its cover, whereupon it at once spread out and drifted slowly to the ground with its passenger. His aeroplane, the motor of which had been stopped, went through a series of fantastic movements before coming to earth, which it did without damage.’

For Pegoud the technique of looping in a complete circle must have fallen into place very quickly. In fact it was no more difficult a manoeuvre to perform than those he had already mastered and displayed. On 21st September 1913 he demonstrated the loop in a display to an enthralled public. The distinction of doing the first loop is credited to Lt. Petr Nikolaevich Nesterov of the Imperial Russian Air Service in his Nieuport IV.

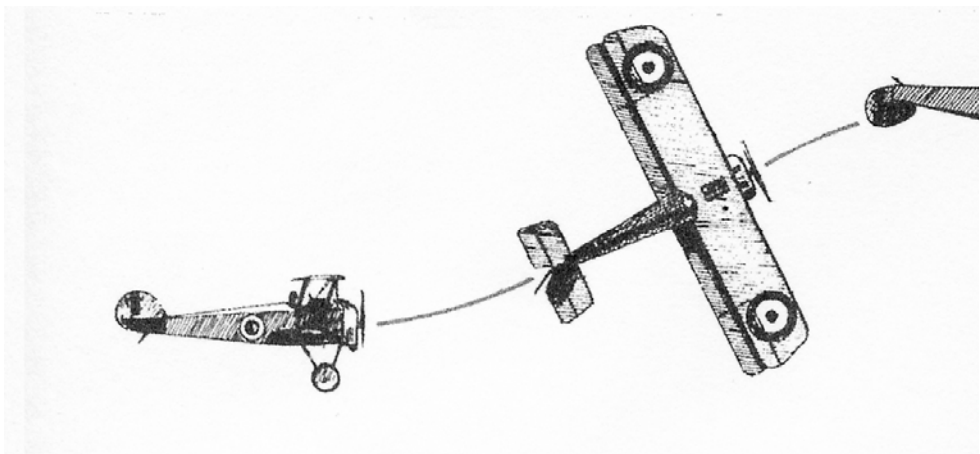
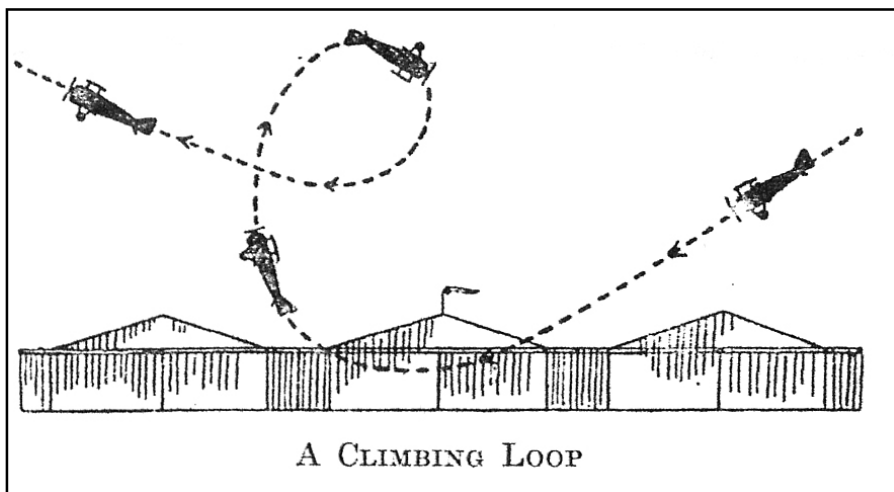
The author of the “Complete Book of Aviation”, Squadron Leader C D Burge, published in 1935, elaborates further on the loop;

The Loop. Pegoud's original form of loop bears little resemblance to the, loop of today, because it was done in a Bleriot monoplane with but small reserve of power. He dived his machine steeply for a prolonged period, until the speed had risen considerably above that attainable in normal level flight. He then pulled the control stick steadily backwards and the machine completed a rather small loop, coming out much below the height at which it had begun its dive. Today, a modern single-seater fighting aeroplane can be looped without any previous dive to gain speed, and an ordinary light aeroplane can be looped after a brief period of nose-down engine-on flying to gain momentum.



The process of looping differs according to the kind of loop it is desired to trace. 2 main types may be distinguished: the climbing loop and the rocket loop. Loops are also possible with the engine off, but they are not often seen.

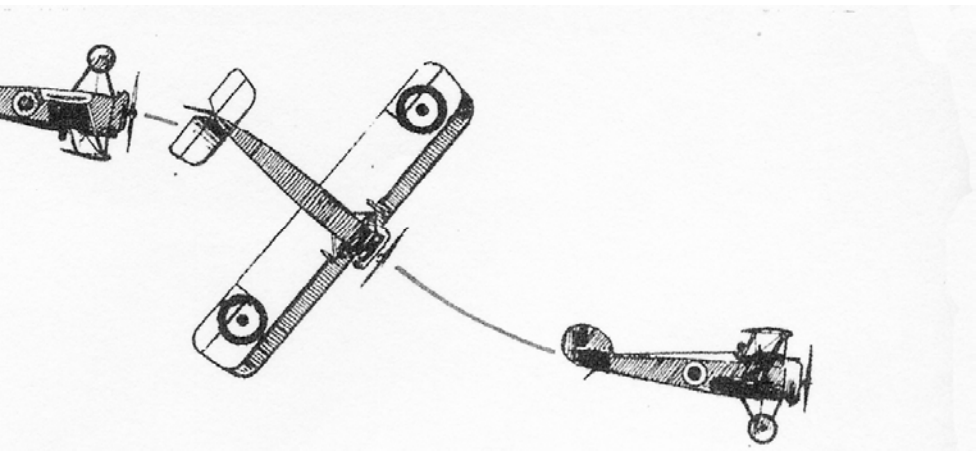
CLIMBING LOOP. In the climbing loop, however, a good amount of excess speed is gained prior to beginning the loop, and the machine is taken up on a gradually steepening climb until it curves over at the top; The path traced by the machine in a climbing loop is not truly circular, but is a curve of continually decreasing radius. Thus, the loop is begun on a very large radius and the curve is "tightened" all the way round so that the loop is completed on a very small radius. A good deal of height can be gained during a climbing loop, and it is a safer loop to perform near the ground than the low-speed loop.



ROCKET LOOP. The rocket loop is totally different from the climbing loop, although it is sometimes confused with it. The machine is first allowed to gather a very big reserve of speed by diving steeply with the engine on. When sufficient speed has been accumulated the nose of the aeroplane is pointed vertically upwards as quickly as possible without straining the machine by a rough alteration in flight path. When the nose has been pointed vertically upwards, the engine now being fully open, the machine is held for so long as is possible. The machine therefore rockets skywards perhaps for thousands of feet if it is a high-performance type of single-seater. When the speed has fallen to what the pilot judges to be the limiting figure, the machine is fairly rapidly pulled over on to its back and round for the completion of the loop.

In the next issue of *Flightlines* further aerobatic manoeuvres of these early aircraft will be explored, and perhaps a glimpse of pioneer exponents of aerobatics, like Lincoln Beachy and others.

Eamonn Keenan



SNIPPETS FROM THE ZONE

GERARD FEENEY PONDERES SOME MORE MODELLING MATTERS...

Can it be 2011 already? While it was still 2010, however, Padraic Cryan had some interesting adventures with a tailless terror...

DELTA BLUES

Padraic's new Weston UK 'Mini Tiger Shark' delta had a short but memorable career. This .25-powered diminutive thingie flew very rapidly but very nicely when trimmed out after some initial set-up tweaking was complete. It made a refreshing change to see a delta scurry about the sky, but unfortunately its gallop came to a sudden and unexpected halt one fine evening in September...

...Padraic and I were flying together in ideal conditions – blue sky and calm, but it was gradually getting more dusk. On one of the later flight sessions, I was busy peering skyward at my 'Bushwhacker' and Padraic was preparing to land the delta. I knew he was on the approach pattern, but didn't bother looking as my own model was quite high up at the time and I needed to concentrate.

Suddenly Padraic exclaimed: "I've lost it!" I was a bit puzzled what happened. Padraic then explained that he became momentarily disorientated on the final leg of the approach pattern and the model had piled in. He went to fetch the 'MTS' in the next field where he thought it had crash-landed. But, it was not that easy! There was no sign of the model in the field. I landed and then joined him in the search.

For the next two-hours in the now rapidly-gathering dusk we searched in vain. There was absolutely no trace of it in the field or in any other field adjacent, or in trees or hedges! At about 10.30 p.m. and with the stars out we gave up in disgust and abandoned the search. (Up to then, we had to communicate via our mobile phones, as we couldn't see each other when spread out in the different fields!)

Padraic and I again searched for at least two-hours the following afternoon in bright, warm and sunny weather. I even wore my glasses to help me see better. There was still absolutely no sign of the model, high up or low down – literally! It was extremely puzzling. Padraic had to go home again and I then searched solo the following day.

That third search attempt produced another negative outcome – no delta to be seen. It was as if it had been snatched into another dimension! It was both frustrating and infuriating, as most likely it may have been hidden in some drain just out of sight.

I bumped into a neighbour on the way home and told him what had happened and I asked him to keep a look out for a lost R/C model. He said he would. But, neither Padraic nor I held out much hope.

And so, the weeks passed and it seemed that model was lost forever. Padraic understandably bemoaned the loss of a new model, radio gear and engine but put it down to experience and moved on.



Padraic Cryan's Weston UK Mini Tiger Shark delta has had a short but eventful operational life so far!

Then, on another sunny afternoon in October, my mother said that someone was outside with a model aircraft. I assumed it was some person coming for assistance, and I prepared to get ready for him. Then, she said that the guy had left a model aircraft inside the front gate and was leaving again! By the time I reached the kitchen, the car had already pulled away. But, my flabber was well and truly gasted when I saw just what model had been left at the gate – it was Padraic's long-lost delta! Well, Holy God! Obviously somebody had found the model, but had left it back to me anonymously. Unfortunately, my mother didn't recognise the man who left it.

A mixture of feelings followed – happiness and disbelief that it was back, but annoyance that the person hadn't introduced themselves.

The model looked initially okay but was badly water-soaked and the covering was peeling off in places. The engine and metal fittings were also corroded and the radio components were soggy. But, it was remarkably undamaged structurally. Apart from some glue joints failing, and a slightly warped wing leading edge, only a broken prop blade showed that it had impacted with some force.

I told Padraic the relatively good news and he expressed similar feelings of disbelief and curiosity on its return by the mystery man! When he called to collect it the next day, I had already dried the airframe and fixtures and fittings as best I could. Padraic then stripped it down and refurbished it completely to flying condition at his place. He had to bin the servos and receiver battery that had crapped out, but the receiver still worked okay.

Unfortunately the engine is now lacking power, so further flights have been postponed 'til a new powerplant is got, or until a replacement con-rod is purchased for the existing engine.



Padraic's latest, larger and anonymous delta is a good performer.

So, a most unexpected outcome to that 'disappearing delta' occurrence and some lessons learned. The main lesson is don't fly small fast models too far out and low down on landing approaches in failing light. Also, it seems that one's depth perception may become unreliable in such conditions. Padraic could have sworn the model was much closer when it piled in, but apparently not. And, if it was in fact closer to us, it did a great job of hiding itself! It is more likely that it landed much further away than either of us estimated, and the fact that I didn't

see it fall to earth didn't help matters either.

It'll be nice to see the Tiger Shark fly again in due course – with hopefully much more long-lasting sorties!

DELTA DOUBLE ACT

Meanwhile, Padraic has acquired another, larger .40-powered delta and has had better success with that.

Originally belonging to David Furneaux, this delta's name is unknown but it came in ARTF form. Padraic stripped off the original covering and gave it a complete Solarfilm makeover. With a brand-new O.S. 46AX and the necessary radio equipment installed, the model has flown twice so far. It is reported to have performed well, apart from a slight post-launch dip, and it's a smooth flier overall. At least this has made up for the smaller delta frustration!

TAIL OF WOE

The venerable ‘Calypso’ is now in its sixteenth-year of existence, and to celebrate that I took it out for a spin in early January. Though looking very shook and aged (like its owner now?), it had already flown well on New Year’s Eve, so I had every confidence it’d do so once more in the first days of the New Year. Through past experience, I’ve found it’s not a good idea to assume that good things will happen! This was a prime example of counting my chickens before they’d hatched!

There I was, going through my oh-so-familiar and oft-repeated pre-start-up engine-priming ritual. At one point in this exercise, the model is held vertically nose-up whilst I flick excess priming fuel from the engine cylinder.



Gerard got a ‘bum deal’ with the damage to his vintage Calypso rear-end, early in 2011!

This time, in the freezing frosty conditions, my grip on the model failed and it slipped out of my hands vertically downwards, right onto the elevator. This impact promptly dislodged the complete horizontal stabiliser and a bit of attached fuselage structure along with it! The fact that this area had been damaged and repaired before, way back in 1996, probably contributed to the ease with which the horizontal tail parted company with the rest of the fuselage.

After I’d said: “Oh bother!” I had to pack up and return home. The model now awaits repair when I am in better humour to tackle it. Hopefully, it’ll be easy to repair, but I am wondering if a Calypso replacement is now on the cards instead.

I did get flying that day after all, as I got the Bushwhacker out again. That model, normally rather twitchy and with a not very nice rudder response in a breeze, flew nicely in the calm conditions and looked very cute circling low down, with the brilliant blue sky backdrop overhead. I may now fly the Bushwhacker more often in calmer conditions, on the rare occasions they materialise.

That’s it for now. The modelling news is sparse at present.

Gerard Feeney

The Jodel history

Extracts from www.Jodel.com

The beginning

The Jodel design can be traced back to the end of the second world war when the French government, recognising the value of light aviation, purchased considerable numbers of Tiger Moths and Miles Magisters at a very low cost. These were then passed on to flying clubs.

But these ex-wartime trainers were very fuel hungry and slow. This left a gap in the market for Edouard Joly, a private pilot who lived in the area of Beaune, and his son-in-law Jean Delemontez, to fill. The story goes that they fell upon some pre-war aircraft-quality plywood and an old 26 hp Poincard engine and without formal training in aerodynamics decided to design their own single-seat light aeroplane. The wood was turned into a small, single-seat aircraft with cranked wings. It was so tiny, particularly compared to existing training aircraft, that they called it the D9 Bebe (Baby). The fact that Delemontez spent so much time working on the aircraft, rather than with his wife (Joly's daughter), is also reported to have something to do with the naming.



D9 Bebe

Now, that's how the story went, and it's certainly the stuff that legends are made of. But the truth is rather different. Jean Delemontez was an experienced and trained aeronautical engineer and Edouard Joly also had many years experience of aircraft construction, having built a Pou du Ciel (Henri Mignet's flying flea) before the war. The two men were operating a major aircraft and glider maintenance and repair establishment before the Jodel series' design and build efforts commenced. So the implication that the material for the first D9 were 'found' at the back of a hangar is clearly fabrication, but fun nevertheless.

Initially, the D9 was never intended for any other use than their own pleasure flying. The performance of the little single seater was so promising however, that lots of people, including the government, were standing in line to purchase one. Reluctantly, the two men gave in and started producing them and selling building licences. Over 500 D9's were constructed in the 20 years to follow.



The prototype D9 at its first flight Edouard Joly being the pilot at this very grey winter day with snow on the runways.

The design progress

The structural and aerodynamic features of the D9 and subsequent designs are quite sophisticated, as shown by the robustness and performance of the aircraft, and serve to underline Jean Delemontez's professional abilities.

Then, as now, the French government, always keen to encourage local enterprise, showed an interest in the design and a slightly larger aircraft, the

D11 with two seats, followed. Joly and Delemontez formally set up a company, combining their names. The Jodel company was born.

The two seat D11 series was therefore designed and constructed as a prototype batch for a French government requirement for an aero club trainer. The D11 was successful and its variants, principally the 65 hp D112, the 90 hp D117 produced by Soci t  Aeronautic Normande (SAN) at Bernay and the 90 hp D120 from Avions Wassmer at Issoire, were produced in large numbers for aeroclubs through the French government subsidy scheme. I have also seen versions that were called D119 and 1190.

The Jodel company did not really manufacture that many aircraft itself, their idea being to licence other firms. Jean Delemontez worked directly with two



The first two seater: The D11 series

organisations in particular to develop the various Jodel models and series. With SAN at Bernay he developed the 180 hp four to five seat D140 Mousquetaire and later the 100 hp two seat D150 Mascaret. New samples of the breed are still being developed, the D18 and D19 being the most recent models.

From the 1950s onwards various types, D11, D112, D117 and so on, were built by various companies. There was also a large pool of amateur builders whose examples were generally powered by 90 hp Continental C90s or 100 hp O-200s and usually designated D111. Roughly 1500 commercially built aircraft of this series were produced.

The Robin Connection

Jean Delemontez's work with Pierre Robin's Centre Est Aeronautique (CEA), later renamed Avions Robins, is well known. The CEA Jodel Robin was based on Jean Delemontez's earlier D10 concept, a four seater whose wing had been constructed but then shelved when the D11 work became more urgent. Together with Pierre Robin Jean Delemontez took the Jodel Robin through the DR100, 200 and nose wheel DR300/400 series between 1957 and 1972.

The progression of the DR series was:

DR100 - First produces with 90 hp Continental C90

DR105 - As for the DR 100, but with hydraulic brakes

DR1050 - As for the DR 105, but with 100 hp Rolls Royce or Continental O-200 engine.

DR1051 - As for the DR 1050, but with 105 hp Potez 4E20 engine.



DR 1051 a member of the DR 100 family

Later versions of the DR 1050 and 1051 had a revised tailplane design, giving the model a greater Centre of Gravity range. These models were designated DR 1050 M and DR 1051 M and carried the names Excellence for

SAN built models and Sicile Record for those constructed by CEA. This name originated from the 1964 Round Sicily Rally, which was won by Pierre Robin at an average speed of 162 mph (in a 105 hp 4 seater!!)

The DR 100 series was succeeded by the Robin DR 200 range of aircraft, being very similar to the DR 100's. The DR 200 series started with the DR 220, of which 83 were built in 1967. The 220 was eventually given a 108 hp Continental O-235 engine, in stead of the original O-200A, and was then called the DR 221 Dauphine. The Dauphine was later given a 160 hp Lycoming O-320-D2A engine, making it the DR 250 Capitaine. The DR 250 was the ultimate tail dragger. After some 100 of them were produced, the DR 250 was later given a larger fuselage, tri-gear undercarriage and a 180 hp Lycoming O-360-D2A, making it the DR 253 Regent.

By this time, the whole range of aircraft had been taken over by Robin. Meanwhile, Joly and Delemontez were not sitting idle. Having built the D9, D10 series (=DR100) and D11 series, it was time to move on. After some ideas that never materialised, the D140 Mousquetaire was introduced. It was to become the biggest jodel ever built: a 180 hp tail wheel design with four/five seat capacity. Early Mousquetaires featured a rather ugly triangle vertical tailplane, later ones were fitted with tailplanes like on the DR 1050 M and DR 200 series.



D140 Mousquetaire, the largest Jodel production model

The next design coming from Delemontez' drawing board was the D150 Mascaret. The Mascaret was intended to be the successor of the aging D11 series. It was a two seater, fitted with a modified DR100 wing and a 100 hp Continental O-200A engine. The design proved very successful and quite a few have been built by both

factory and amateur builders.

After the D150, a D160 prototype was built. It was to become a six seater fitted with a six cylinder 235 hp Lycoming engine. The interior was fitted with two sets of individual seats and a rear bench seat. It had an electrically actuated canopy, hinged on the port side. It featured a wing span of 10,86 meters and had a length of 8,32 meters. A version with retractable gear and a constant speed prop was envisioned, but ultimately, the D160 never saw production.



Homebuilt D18

As far as I know, the D 17, never saw the light of day. The D 18 and D 19, however, do exist. They are small two seater home builds that are usually powered by converted Volkswagen engines. Plans are being sold to homebuilders, but they were never factory produced. Just recently,

the D 20 prototype was unveiled. It is a tri-gear scaled down Robin DR 400 look-alike. SAN plans on producing it in kit form for amateur builders.

The original Avions Jodel company still operates as a design bureau and licences constructors (professional and amateur) through the sale of plans for specific models, D9, D11 series, DR100 series, D140, D150 and more recent D18 and D19. In addition an associated company SAB



Modern, tricycle DR 400

(Société Aéronautique Bourgoyne) produces parts (fuel tanks, canopies, undercarriages) for most Jodel variants.

Adrian McShane

GT Power, CCPM Deluxe Servo Tester



This little unit is by far the most useful piece of gear I have ever owned, up there with the 'pushrod connector' in fact. It is really a servo setter as well as a servo tester as such. It comes into its own when you have finished the model, the servos are screwed-in and it is time to measure and cut the pushrod snakes. This is never an easy job as the servo arms keep rotating out of their neutral position as you attach the clevises. This means that you have to constantly switch on your transmitter and receiver during adjustments, remembering to ensure the sticks are at trimmed neutral. The Tester bypasses the Tx. and Rx. and keeps the servo at trimmed neutral all the time for you!

I suggest you sellotape an old, small size receiver battery to the Tester so you don't also have to plug-in and use the model's battery all the time. So now, off you go and remember you can plug-in up to three servos at a time. Here are the three switchable modes:

- 1: Neutral. Cause servos to constantly inch back to neutral and hold there.
- 2: Manual. You can rotate the big knob causing the servos to rotate to their full extent and back.
- 3: Automatic: Causes the servos to constantly act like 'windscreen wipers' as they motor over and back from their maximum angle. Useful to see that all horns are moving cleanly.

You can also test Electronic Speed Controllers and even the servos of CCPM helicopters. All this for £9 Sterling and very reasonable postage to Ireland from the very helpful guys at BRC Hobbies. www.brchobbies.co.uk

Tim Costello
Shankill R.F.C.

10 Things Every Club Instructor Should Know

BEING AN ACE FLIER DOESN'T NECESSARILY MAKE YOU A GOOD INSTRUCTOR, AS ANDY ELLISON POINTS OUT

1 Take a logical approach. There is no right or wrong way to teach someone to fly R/C models, however there is a logical approach that breaks down the challenge into simple stepping stones. For instance, there is little point in teaching somebody how to take off unless they've learned how to climb out into a circuit first. Good instruction starts with some understanding that a level of meandering around the sky is required before you start to impose regimented flight on an individual. There's a good chance that some will find it harder than they thought and after a few flying sessions may consider that the hobby is not for them. Don't be disheartened by this, it's simply a by-product of how easy it is to get into R/C flying these days.

2 Be well grounded. An instructor's remit is diverse. For example, he must teach a pupil how to fly a model, advise on which model to buy, where to buy it, how to build it, how to programme the Tx, how to work the engine, how to charge the batteries, and he really ought to explain basic aerodynamics.



He must also make his students aware of model flying legislation, insurance, basic safety, different model flying disciplines and integrate him (or her) into the model flying club. It goes without saying that an instructor should

have a good grounding in aeromodelling and should lead by example.

3 Know how to communicate. As an instructor learns his art he will develop many and varied methods of communicating the same message to an individual. This is necessary as trainee pilots tend to try and assimilate a lesson by using principles they're familiar with. A person from an engineering background, for instance, may better understand the terminology of the hobby than someone with a less practical upbringing. As such, an instructor may have to try various methods of explanation before the novice pilot understands what's being said. Fear not, though, good communication skills can be developed over time.

4 Don't underestimate the advantages of model flight simulators. This is a particularly sticky point with old school instructors who pre-date the creation of the model flight sim. Although you may not gain anything yourself from time on a flight sim, it doesn't mean your students won't. Updated graphics and programming options are greatly improved over the earlier examples and are particularly useful at helping with orientation problems and basic helicopter training. Doubly so if the pupil is a child of the Nintendo generation.

5 Be prepared to crash models. Teach for any length of time and, sooner or later, you'll end up being the one holding the Tx when a beginner's model hits the floor. The key is to ensure the novice realises that at some time in his training, damage to his model is going to occur. Assuming all is well with radio gear and model integrity, damage usually happens as a result of a mistake when learning how to



*Sometimes it just happens.
The look on the pilots face says everything!*

take-off and land. Of course, buddy box systems help to avoid an unsightly fight over a transmitter as the instructor frantically tries to regain control, however they don't suit every instructor. Should damage occur, it's essential that the cause is discovered and properly explained in a manner that the novice accepts.

6 Demonstrate, imitate, re-capitulate. There's no substitute for an instructor's ability to demonstrate what is required of the novice pilot. If a novice can see his instructor demonstrate something using his own model it allows him to imitate the manoeuvre rather than have to interpret what he believes it should look like from a verbal explanation.

After an element of imitation the instructor can recapitulate, or demonstrate again, highlighting areas of error to achieve an even better understanding of the task in hand.

7 Know when to take control. As the instructor, you set the rules for when you retake control. Early on, you should tell beginners that there will be times when they may well be in full control of the aeroplane, yet you will still wish to take control. The first limitation you might impose could be to do with dead air space or a no fly zone. If it even appears that the student might accidentally cross it and fly over, say, the pits, you should retake control. While it is possible that the student may have been able to continue flying without crossing the line, you should not take any chances with safety.



Simulators can work well for a good number of students.

While learning how to fly circuits, beginners often lose altitude in each turn. When the plane descends below a certain height you should retake control and regain the altitude. Even though they may be doing rather well this provides the challenge of keeping the aeroplane above your cut-off point. Finally, you might set a distance limit. If the model gets so far away that it becomes difficult to see, you should retake control.

As the beginner progresses, they may protest when you 'cut in' for they may feel they're still in total control. Of course, by the time they finally acknowledge that they're in trouble, it may be too late for you to save the aeroplane. As such, you should make it very clear at the start of your instruction that if the student protests when you ask for the transmitter, or flick the buddy switch in your favour, you will stop teaching them.

8 Know how to narrate a flight. The thing that instructors commonly struggle with is the narration of the flight, or talking whilst instructing. You should not be afraid to talk to the student while they fly, though you must be careful to stick to the point. You will also want to be sure that the student is not just mimicking your instructions as you speak. To confirm that they truly understand what you've been saying and are learning to apply it, keep your mouth shut for a while and just watch them fly. If they continue to do well, you'll know they've been taking it in.

9 Know when enough is enough. We all have a limit with regard to the amount of new information we can accept in a given period of time and trainee R/C pilots are no exception. Keep in mind that your student will be concentrating very hard during practice sessions and there will come a point when he simply cannot absorb any more. One common symptom of this will be when student has been doing just fine for about eight to ten minutes, then, all of the sudden, he'll start to make silly mistakes.

As the instructor, you must be able to recognise when the student has had enough, take the transmitter and land the model.

10 Set realistic goals, brief and debrief. It's important to set a goal. This may be a long term goal such as a BMFA 'A' Certificate with shorter, interim milestones such as a first take-off or a first landing. Each flight should have at least a 'target' whether it be a new manoeuvre or a consolidation flight of lessons already learned. The goal should be part of a pre-flight briefing made before the flight commences. A post flight de-briefing should review how things went and you should praise those areas where progress has been made. You will have the student's full attention during a debrief and can now offer advice and constructive criticism. Analyse areas of the flight that went wrong, reassign the goals if required and take the student up again to consolidate.

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Undeserved Reputation

When modellers discuss various aircraft, they generally do so with a view to, (fantasising about), building a model of it at some stage in the near future, (substitute 'near' with 'far'). Some aircraft have been left largely alone because of half truths and misconceptions about their flying qualities, which have gained notoriety over the years and attained the status of 'fact'.

One group of aircraft which have suffered unduly are the Gee Bee's, designed and built in the Granville Brothers Workshops located in Springfield, Mass. USA, close to the Springfield Airport during the early 1930's. Of outstanding design for their day, their speed and aerobatic qualities soon attracted the foremost distance and racing pilots to buy them.

The Granville brother's background was in car and aircraft maintenance. Zanford Granville. (known as "Granny"), was dissatisfied with the way that aircraft of the time were built. Because of their design, many of them needed constant repairs. As a result, he designed and built an aircraft which incorporated the ideas he had for improving the design of many of the parts which needed constant repair. He also incorporated features which he felt would make an aircraft better and safer to operate.

The new aircraft was a biplane with side by side seating for two. The rudder, elevators, wings and struts were all interchangeable. The landing gear, a combination of oil and rubber, was designed to make even a poor or difficult landing, safe. It was a complete success but the stock market crash forced the Granville's to cease production of the Gee Bee biplane, after five examples had been sold.

At this juncture, the Granville's had augmented the team with three engineers, all graduates from Universities, and with experience in the aircraft industry. Early in 1930 a flying derby, called the All American Flying Derby, was announced. Pilots would have to cover a round trip of over 5,500 miles. Determined to enter, they somehow managed to gather enough money for the production of their next Bee Gee, designated the Model X, or Sportster. With Lowell Bayles as pilot, (later killed in a subsequent Gee Bee), he placed second to Lee Gelbach in the Command-Air Rocket. The prize money was the catalyst for an aircraft, based on the airframe of the Sportster, but with more powerful in-line engines, which sold to wealthy Sportster pilots and advertised as *"the fastest and most manoeuvrable licensed aeroplane for its horsepower in the United States."* These sporty little model D's, (25ft wing span), were frequently flown in air shows and were very successful racing in their engine class. They were also quite successful in classes above their horsepower range.

Although not primarily designed as racing aircraft, they soon developed a reputation, early on, for just this purpose. Their reputation can be gauged when Clem W Whittenbeck, one of the outstanding aerobatic performers of the day, said, *"I flew it at many major air shows and it always stole the show wherever I went. It had positive control throughout all aerobatic manoeuvres, and it was the first plane I ever flew that could do a vertical-triple-snap-roll, a positive recovery, and still be pointing up. To me it was an aeroplane years ahead of its time."*



Model D with inline engine and showing its racing number.

A development of the model D was built with a Warner Radial engine and designated the model E and proved to be another outstanding success. The next model, the Senior Sportster, was an enlarged version of the model E with accommodation for two. The wingspan was now 30ft and was offered with a larger engine producing between 150 and 300 horsepower.

These Senior Sportsters recorded an amazing number of racing victories as they were virtually unbeatable in their class. They could more than hold their own against powerful racing aircraft, and it is ironic that they were built as two seaters but did most of their flying as single seaters with the front cockpit covered to improve streamlining for racing.

At this point a number of erroneous 'facts' began to circulate among many whose knowledge of, and understanding of, the Bee Gee aircraft was based on sensational reports in popular print media.

A fatality which occurred when piloted by a well known female racing pilot, Florence Klingensmith, fuelled the sensationalism. The available evidence suggests that as she rounded the pylons, the fabric could be seen bulging upwards between the ribs and eventually split between the first two inboard ribs. She levelled out and veered off the race course, flying in a straight, line quite some distance from the field, when the Sportster stalled and crashed, claiming the life of the pilot.

As produced, the Gee Bee was designed for a maximum of 240 horsepower, and a maximum speed of 200 mph, but it had, since it left the factory 3 years earlier, acquired a Wright Whirlwind engine delivering between 500 and 600 horsepower!

‘Granny’ Granville, who was attending the race, hated to see it being raced when it was designed for ordinary sports cruising, and built around an engine in the 250 hp range, and evidence that little attention had been given to the rib spacing or rib stitching required for the higher speeds possible with the much larger engine.

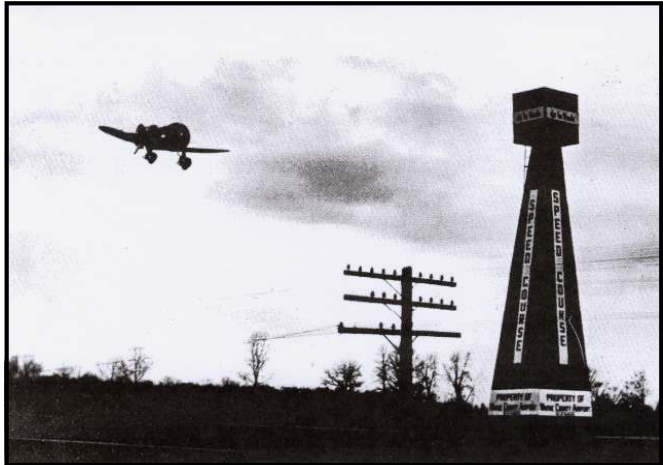
None the less, racing success led to a new design, the Model Z, specifically to accommodate a supercharged 535 hp Wasp Jnr. Engine, which had powered Jimmy Doolittle in the 1930 Bendix Victory in the Laird Super Solution and being sponsored by Pratt & Whitney. Entered in the National Air Races, it won all five races it was entered in. Lowell Bayles, its pilot in the Shell Speed Dash Race, established a new record of 267.342 mph. He made one pass at 286 mph, the fastest speed ever recorded by a land plane. The existing world speed record at the time was 278.98 mph. As a result, a few months later, he made three unsuccessful attempts at the world record, and recorded on one pass a speed of 314 mph, but trouble with the engine propeller prevented him making the four passes as required.

On December 5th 1931, Bayles started another attempt at the record. As newsreel cameramen recorded the event, Boyles roared through the speed traps at top speed. Suddenly, about half way through the course, the nose came up abruptly and it shed its right wing panel and rolled into the ground in a spectacular crash.

Many of us have seen the film footage of the accident, as it has been used in many films needing a spectacular aeroplane crash. While it has never positively been determined just what caused the crash, a reasonable explanation has been given. Upon careful study of the footage, frame by frame, something is seen heading for the windshield just before the nose of the plane came up.

Two young boys had brought in Bayles's goggles and the planes fuel cap which they found on the course some distance from where the crash occurred. There was no way, the goggles which Bayles always wore, could have left the enclosed cockpit unless the canopy has been shattered. As the fuel cap and the goggles had been found back up the course close to each other, it is reasonable to believe that the cap came loose as Bayles entered the course. It must have shattered the windshield and hit Bayles in the face, causing him to jerk the control stick back, causing the wooden wing structure to fail, with fatal consequences.

This surely was the biggest contributor to myth of the dangerous Gee Bees which has persisted to the present day. Despite this fatal and highly publicised crash the public interest in air racing shifted up a gear. The famed long distance flyer Russell Boardman ordered two new racing aircraft from the Granville brothers. Zanford Granville and his engineers designed and built a new series of air racers which would prove to be one of the greatest racing designs of all times, the Gee Bee R-1 and R-2 Super Sportsters.



The last photo of Lowell Bayles in the Super Sportster as it is about to enter the speed course on the final ill-fated record attempt

To be continued.....

Eamonn Keenan

Sources - *Gee Bee, the real story of the Grenville brothers and their marvellous Airplanes.*
Henry A Haffke

- *EAA sport Aviation Magazine.*
- *"Gee Bee" by Benjamin and Wolf*
- *Correspondence with Henry A Haffke, friend of the Granville family.*



2011 MACI Competition Dates

For the most up-to-date information visit -----www.maci.ie

Helicopter

April 16	Heli Challenge	Midland MFC	Noel Campion	087 9670668
May 15	Heli Challenge	Caron	Noel Campion	087 9670668
June 11	Heli Challenge	Cork	Noel Campion	087 9670668
August 6 & 7	Heli Nationals	Carron	Noel Campion	087 9670668

Gliding

April 16-17	NIMSA Slope Fly-In	Slieve Gallion NI	Fred@gliderireland.net
May 14-15	ISR Slope Fly-In	Mt. Leinster	Open to all Gliders Fred@gliderireland.net
June 11th	Glider Fly-In	Tountinna, Ballina, Co Tipperary	contact Gerry Buckley at 086 3497493 or gerryb2003@eircom.net. (Please note, if Saturday forecast wet, then event moves to Sunday) <i>Anyone interested in flying both days are most welcome to do so.</i>
July 8-11	Retroplane	Pierre Pouqueles, Normandie, France	*Registration Closed* Fred@gliderireland.net
September 17-18	ISR Slope Fly-In	Open to all Gliders	Mt. Leinster, Wexford Fred@gliderireland.net

For more information visit www.gliderireland.net

Scale

Please Note

All Scale Championships, except the Scale Nationals, will be held on a Saturday. In the event of a large number of competitors or bad weather on the Saturday, then the Sunday will be utilised. Please check with the contact below, or the MACI web-site on the Friday that the competition is going ahead.

April 17	Laois Scale Fly In	Portlaoise	Paul Fetherstonhaugh 087 1331736
May 15	Scale Fly In	Curragh	Melvin Inwood 045 433050
May 28	Scale Champs	Midland MF	Declan Henegan 087 2625868
June 11	East Coast Scale Champs - Roundwood MAC		
June 25	Leinster Scale Champs	Portlaoise	Paul Fetherstonhaugh 087 1331736
July 10	Laois Scale Fly-In	Portlaoise	Paul Fetherstonhaugh 087 1331736
July 24	Scale Fly-In	Midland MFC	Declan Henegan 087 2625868
July 17	General Fly-In (All Types)	Curragh	Melvin Inwood 045 433050
September 4	Scale Fly-In	Curragh	Melvin Inwood 045 433050
September 10/11	Scale Nationals + Control-Line		Paul Fetherstonhaugh 087 1331736
October 9	Scale Fly In	Littleton	Michael McEvoy 087 2435209

F3A Aerobatic

May 7/8 Munster Champs Cork MFC N Barrett 021 2475971

May 21/22 Tipperary Champs Carron MFC Gordon James 086 8269840

June 18/19 South Leinster Champs Model County FC
Brian Carolan 087 6509848

August 13/14 National Aerobatics Champs (Team Trial) G James 086 8269840

August 20/21 Nats/Other standby date

September 3/4 AAA (Team Trial) Cork MFC N Barrett 021 2475971

September 24/25 Leinster Champs Model County FC
Brian Carolan 087 6509848

Other

June 25/26	All Models	SMFC Fly In All welcome	Clashafree, Bandon, Co Cork Flying Site Coordinates 51° 44' 23.40" N 8° 41' 40.15" W Contact Jackie Kelleher 021 4506757
August 27/28	All Models	SMFC Fly In All welcome	Clashafree, Bandon, Co Cork Flying Site Coordinates 51° 44' 23.40" N 8° 41' 40.15" W Contact Jackie Kelleher 021 4506757



Looks like there's been a shower at Roundwood!!



Full Size or Models? - Yes they're models. Taken at the LMA Cosford Show.



Kevin Barry's Slingsby Petrel over the Old Head on its maiden flight.